

# **Integral Equations and Operator Theory**

---

**Editor: I. Gohberg**

HMLTN  
QA  
431  
I48

HMLTN  
QA 431 .I48  
Integral equations and opera-  
v 21 index 04/30/1995  
Received: 07-24-95  
UNIVERSITY OF HAWAII  
AT MANOA -- LIBRARY

---

**Vol. 21  
1995**

**Birkhäuser Verlag**  
Basel · Boston · Berlin

The journal appears monthly and is devoted to the publication of current research in integral equations, operator theory and related topics with emphasis on the linear aspects of the theory. The journal reports on the full scope of current developments from abstract theory to numerical methods and applications to analysis, physics, mechanics, engineering and others. The journal consists of two sections: a main section consisting of refereed papers and a second consisting of short announcements of important results, open problems, information, etc.

**50 reprints** of each paper will be supplied free of charge.

Additional reprints cost per 50 copies:

1-2 pages sFr. 143.-, 3-4 pages sFr. 168.-, 5-8 pages

sFr. 219.-, 9-12 pages sFr. 270.-, 13-16 pages sFr. 320.-.

Prices for reprints exceeding 16 pages on request.

Manuscripts are reproduced directly by a photographic process, which excludes the possibility of subsequent alterations.

Authors are therefore requested when preparing manuscripts to observe the instructions printed at the end of the issue most carefully.

#### **Copyright**

It is a fundamental condition of publication that submitted manuscripts have not been published, nor will be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is transferred to the publisher if and when the article is accepted for publication. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microfilm or any other reproductions of similar nature, and translations.

No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher: Birkhäuser Verlag, P.O. Box 133, CH-4010 Basel/Switzerland.

#### **For users in the USA**

The appearance of the code immediately before each article in this journal indicates the copyright owner's consent that copies of articles may be made for personal or internal use, or for the personal or internal use of specific clients. However, this consent is given on the condition that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc., 21 Congress St., Salem, Mass. 01970, for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. For copying from back volumes of this journal see Permissions to Photo-Copy: Publisher's Fee List of the CCC.

Printed in Germany on acid-free paper produced from chlorine-free pulp

#### **For users in Germany**

All rights reserved (including those of translation into foreign languages). No part of this journal may be reproduced in any form – by photoprint, microfilm, or any other means – nor transmitted or translated into a machine language without the written permission of the publishers. Only single copies of contributions, or parts thereof, may be reproduced for personal use. Copies reproduced and used for other than private purposes in an industrial or commercial undertaking are subject to copyright and, in such cases, a copyright fee must be paid to the VG WORT, Abteilung Wissenschaft, Goethestrasse 49, D-80336 München, from whom conditions of payment can be obtained on request.

#### **Subscription Information**

This Journal appears in 3 volumes per year, 4 issues per volume.

Annual subscription:

sFr. 798.-/DM 939.-/US\$ 549.00,

postage not included.

Single issue.

sFr. 78.-/DM 94.-/US\$ 54.00,

postage not included.

Subscription orders should be placed with Birkhäuser Verlag, P.O. Box 133, CH-4010 Basel/Switzerland or through your bookseller or subscription agency.

Claims for undelivered issues must be made promptly – as the very latest, immediately following receipt of the issue preceding the missing number. No cancellations are accepted for the calendar year once subscription has been entered. Cancellation of standing orders must be effected 3 months before the end of the publishing year.

#### **Abstracted/Index in**

CompuMath Citation Index, Current Contents, Mathematical Reviews, Zentralblatt für Mathematik, Mathematics Abstracts, DB MATH

# Index, Volume 21, 1995

Adukov, V.: On factorization indices of strictly nonsingular $2 \times 2$ matrix function . . . . .	1
Agler, J., Stankus, M.: $m$ -isometric transformations of Hilbert space, I . . . . .	383
Albeverio, S., Brzezniak, Z., Dąbrowski, L.: The heat equation with point interaction in $L^p$ spaces . . . . .	127
Arai, A.: Scaling limit of anticommuting self-adjoint operators and applications to Dirac operators . . . . .	139
Bagchi, B., Misra, G.: Contractive homomorphisms and tensor product norms . . . . .	255
Ball, J.A., Gohberg, I., Kaashoek, M.A.: Two-sided Nudelman interpolation for input-output operators of discrete time-varying systems . . . . .	174
Belitskii, G., Nicolaevsky, V.: Linear functional equations on the line . . . . .	212
Ben-Artzi, A., Gohberg, I.: Inertia theorems for operator pencils and applications .	270
Chan, R.H., Jin, X.Q., Ng, M.K.: Circulant integral operators as preconditioners for Wiener-Hopf equations . . . . .	12
Duduchava, R., Prössdorf, S.: On the approximation of singular integral equations by equations with smooth kernels . . . . .	224
Ehrhardt, T.: Finite sums of idempotents and logarithmic residues on connected domains . . . . .	238
Feldman, I., Gohberg, I., Krupnik, N.: On explicit factorization and applications .	430
Foias, C., Frazho, A.E., Li, W.S.: On $H^2$ minimization for the Carathéodory-Schur interpolation problem . . . . .	24
Haimovici, I., Lerer, L.: Bezout operators for analytic operator functions. I. A general concept of Bezout operator . . . . .	33
Junghanns, P., Roch, S., Weber, U.: Finite sections for singular integral operators by weighted Chebyshev polynomials . . . . .	319
Kheifets, A.: On a necessary but not sufficient condition for a $\gamma$ -generating pair to be a Nehari pair . . . . .	334
Kravchenko, V.G., Lebre, A.B., Litvinchuk, G.S., Teixeira, F.S.: A normalization problem for a class of singular integral operators with Carleman shift and unbounded coefficients . . . . .	342
Krupnik, I., Markus, A.: Some remarks on factorization of selfadjoint matrix functions . . . . .	71
Lin, P., Rochberg, R.: Hankel operators on the weighted Bergman spaces with exponential type weights . . . . .	460
Porta, H., Recht, L.: Variational and convexity properties of families of involutions .	243
Pozin, S.M., Sakhnovich, L.A.: On one extreme problem in the theory of approximation . . . . .	484
Rubin, B., Shamir, E.: Calderon's reproducing formula and singular integral operators on a real line . . . . .	77
Takahashi, K.: Invertible completions of operator matrices . . . . .	355
Wimmer, H.K.: Isolated semidefinite solutions of the continuous-time algebraic Riccati equation . . . . .	362
Yafaev, D.: Resolvent estimates and scattering matrix for $N$ -particle Hamiltonians .	93

## Short Communications

Patel, S.M.: A note on $p$ -hyponormal operators for $0 < p < 1$ . . . . .	498
Zhu, K.: Hyponormal Toeplitz operators with polynomial symbols . . . . .	376

